شركة ابو سمرة للأجهزة الطبية
ISO
9001/2000
ABU SAMRA FOR MEDICAL EQUIPMENT
www.abusamramedical.com

Manual instruction

CLASS A

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Attach files :

1- Different figures of dental machine content and circuits.

2- Faro instruction manual.

DENTAL UNIT

INTRODUCTION

The purpose of this instruction manual is to help you become familiar with the main features and potential of the equipment

These products have been design on the base of the following:-

- ISO 6875 Dental patient chair
- ISO 14971 Risk management
- ISO 11134 Sterilization of health care prod
- ISO 7493 for dental stool
- ISO 7494 Water and air supply
- ISO 9687 Dental equipment graphic symbols
- IEC 6011
- Directive 93/42/EEc

Warranty

Customer name:
Unit:
Model : CLASS A.
Serial no:
Purchase date: / / 20 .
Installation date: / / 20 .
Invoice No: , Date: / / 20
Warranty failure date: / / 20 .

1-The production and test according to the dental unit plans.
2- PRO equipment is guaranteed ex works agents defects in materials or workmanship for a period of one year following installation.
3-the company will provide any repairs or replacement during the warranty period.
4-the warranty shall not be upheld in case of :-
(a) Damage due to misuse.
(b) Installation adjustments change or repair not performed by trained dealer technical staff.
(c) The equipment is not used according to instructions.

Customer Service No.+2 02-6650475 - 0101370766
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SOCKET TABLE

No.	Specification	Function	Color
1	Socket 1	Connection between chair circuit and foot control	gray
2	Socket 2	Connection between chair circuit and water circuit.	gray
3	Socket 3	Connection between water circuit and sensor	gray
4	Socket 4	Connection bet. Water circuit and bracket control	gray

Look Fig(10)

PATIENT CHAIR

TECHNICAL SPECIFICATIONS

1- General:

1- Electrically driven chair in all movement and controlled by foot
2- *Four* programmable position
   a) (P1) programmable working position No. 1 with light ON
   b) (P2) programmable working position No. 2 with light ON
   c) (R) last position with light an bowl control
   d) (P3) Uncon. Position
3- Automatic returning to the initial position with light off (Reset) .
4- Safety stop from zero push button.
5- Double articulating headrest.
6- Articulating hand rest for patient access.
7- Upholstery synthetic vinyl washable anti-microbial plastic leather and treated.
8- Over load switching.
9- Suitable for weight up to 150kg.

2- Technical data

Model: *Class A*	Maximum seat width : 50 cm Maximum chair length 200 cm .
Power supply : 220 volt 50 Hz	upholstery synthetic vinyl plastic leather .
Control voltage :12 volt	Padding : from high density Foam .
Total weight: 200 kg	chair total rising time :15 sec .
Maximum load : 175 kg	chair total lowering time : 15 sec .
Minimum seat height :46 cm	back rest total rising time : 15 sec .
Maximum seat height :77 cm	back rest total lowering time: 14 sec .

3- Applicable standard:

1- CE MARK: MEDICAL DEVICE DIRECTIVE NO 93/42/EE .
2- International Standard (Medical Electrical Equipment) IEC 601-1 .
3- Dental patient chair ISO 6875/95.
4 -Dental equipment ISO 9687/93 .

INSTALLATION

A technical person authorized by the company does the installation operation as follows:-

a) The following should be considered:
   1) The floor must be horizontal .
   2) Enough space for the chair (2x1.5m²).
b) Remove the chair from the shipping packing.
c) Put the unit on the floor without fixation.
d) Install the headrest on to the backrest by pressing as shown in Fig (3).
e) put rubber below the chair base as shown in Fig (3).
f) Fix the backrest by three bolts as shown by fig (3) if it was unfixed.
g) Feed the chair electric power and make operational cycle.
h) Fix the assistant unit with four bolts if it was unfixed .
i) At the highest seat position install the seat pad by four bolts as shown in fig (3).

Warning and precautions:-

1) The apparatus is built for dental use only any other use is not permitted. No modification on the apparatus takes place without previous written authorize from the manufacture.
2) It is recommended that any tech. adjustment as well as any repair of apparatus not specifically listed in the trouble shouting is it be carried out by qualified technicians.

Causation:

It is recommended to advice use of any detergent or strong abrasive for moving the "difficult stains"

Fuses must be replaced by fuses have the same nominal value

The patient chair must be connecting with supply voltage single phase 220V. ± 5% 50Hz

OPERATION

Every time you connect the power supply and power switch on press the (ZERO) switch and listen to the beep sound.

Seat :

1- Upper motion by moving the right foot control joy stick to the UP.
2- Lower motions by moving the right foot control joy stick to down.
3- Zero position (Reset) by depressing on (ZERO) switch at the foot control (Fig.7) also it used as an emergency switch to stop any automatic motion.

Back Rest :

1- Front motion by moving the joy stick control lever to the right.
2- Back motion by moving the joy sticks to the left.
3- (Reset) by pressing on (ZERO) switch at the foot control it must be use when connect power switch on.

Program P1 or P2 :

allow saving any two working position by pressing the related joy stick (4-5) second until the buzzer is actuated and hearing long beep. The programmed positions is recalled by one touch on the programmed joy stick (P1 or P2).

last-P : (Rising) at any working position by pressing the joy stick (R) the light will be OFF the back goes to primary position And the bowl flushing well start. By repressing the joy stick (R) the back will move to the last position and the light will be on.

(P3) Uncon,: by momentary pressing the joy stick (P3) the back will move to the last backward position. by pressing on zero switch during the Uncon. Movement the chair will be stopped.

Hand Rest :Fig (5)

1-Pull the hand rest up, moves it by 100 degrees.
2-Primary position, by returning it with the same degree.

Head Rest:

1- Upper movement by puling up.
2- Down movement by pressing down.
3- For different position loosen the headrest knob counter clockwise, adjust the headrest to the required position then tight the knob clockwise. Fig(6)

Note: Make sure the knob is firmly tightened after reaching the required position.

MAINTENANCE

Use natural water to clean the outer surfaces with a soft cloth. If you wish to use other products to sanitize the outer surfaces of the equipment make sure that they do not contain, alcohol, ammonia, acid of any kind, gasoline, thinners or benzene-based solvents.

To avoid damaging the surface finish, do not spray deodorizers or insecticides directly onto the equipment

TROUBLE SHOOTING

Symptom	Possible causes	Solution
The chair do not work at all	The power SW not connected	Be sure that the power switch is lighting
	The fuse F1 fault	Change the fuse F1 (3A)
	The fuse F3 fault	Change the fuse F3(10A)
	The chair it is fault	Change it
The chair don't work at one position	Micro SW at Joystick	Change the micro switch
At Zero position don't listen the buzzer sound	The limit SW don't contact	Change it

Look Fig(10)

ASSISTANT UNIT

ASSISTANT UNIT
TECHNICAL SPECIFICATION

- With cup filler and cuspidor.
- **The Bowl :** Made of ceramic for easy cleaning.
- **The Bowl water :** Stop automatically after a pre-adjusted time and can be adjusted from the keyboard at doctor table { No. (12) at Fig. (15)} or assistant unit by press on the Bowl switch, the water flow can be adjusted by Bowel flow control valve No. (11) at Fig (8) .
- **The Cup water:** You can adjust the time by pressing on cup switch at doctor table keyboard for the required time, the flow can be adjusted from cup flow control valve (12) at Fig (8).
- Rotational motion for more easiness.
- **The weight:** 4.5 kg
- Saliva Ejector with easy disconnection and sterilization.
- High suction with easy disconnection and sterilization.

INSTALLATION

Mounting:

1- Fix the assistant unit support with the chair by four bolts in Fig (9). If it was unfixed.

2- Fix the bowl unit as shown in Fig (9).

Water Connections: connect water supply to the water filter as in Fig (11)

- connect the compressed air from compressor to the unit by table 4x6 *** to the pressure gage G1 (pressure 4 - 5 bar) Fig (11).

OPERATION

- Bowl, cup flow can be adjusted by control valve(11&12). Fig (8)
- Saliva ejector and high suction operation is automatically done by removing the tip from the holder. In Fig (8)

TROUBLE SHOOTING

Symptom	Possible Causes	Solution
1- Water drops from the cup or the bowl tap	-Precipitation of dust on the solenoid.	Remove the solenoid and clean it after switching off the power
2- Defective saliva ejector & high suction unit	- Saliva generator may be plugged. -Improper fixation of the tube.	Clean the inner part of the tube by warm water.
3-Weakness in the water intensity.	- Tube may be plugged - Water pressure may be less	Water intensity control from the valve (11, 12) at the Fig(8).
4- No water in cup	- Solenoid S1 defect *Fig(8)*	Change it
	- Control valve (11) may be closed	open it
	- Defect of water circuit	Change it
5- No water in bowel	- Solenoid S2 defect *Fig(8)*	Change it
	- Control valve (12) may be closed	open it
	- Defect of water circuit	Change it

MAINTENANCE

Use natural water to clean the outer surfaces with a soft cloth. If you wish to use other products to sanitize the outer surfaces of the equipment make sure that they do not contain, alcohol, ammonia, acid of any kind, gasoline, thinners or benzene-based solvents.

To avoid damaging the surface finish, do not spray deodorizers or insecticides directly onto the equipment.

Clean the inner part of the suction hand piece with warm water every two weeks.

Clean the bowl continuously doesn't leave any hard substance, so not to be plugged.

LIGHTING UNIT

LIGHT UNIT
TECHNICAL SPECIFICATION

- **Power supply:** 12 Volt 50-60 Hz.
- **Weight:** The head 1.5 Kg.
  The arm 4.8 Kg.
- **Illumination:** 25000 Lux.
- **Light pattern :** 9 X19 c.m.
- **Focal:** 70 cm.
- **Bulb:** Halogen 12 volt 50 Watt.
- Smooth light without shadow.
- Easy replacement of the lamp.
- Provided with touch less switch control for disinfection.

Half circular shape of the hand to easy covers and uncovers it for each patient, for disinfection protection.
Applicable standards:
1-CE MARK : MEDICAL DEVICE DIRECTIVE NO 93/42/EEC
2-International Standard (Medical Electrical Equipment) IEC 601-1
3-Dental unit ISO 74940/96
5-Dental operating light ISO 9680/93
6-Dental equipment ISO 9687/93

INSTALLATION

Mounting (If unfixed) :-

1- Take the arm out from the package.
2- Mount the arm (4) with the bush (5) fixed at the assistant box as Fig(13)
3- Mount the circular arm (1) to the arm (4) throw arm ring (3) , the wires should be pulled down to the bush tube and to come out through the bush tube hole. Fig(13)

Electrical Connection:

1-Bring out the cables from the bush tube hole. fig(12)
2-Connect the 2 wires cable in Fig (12) to terminal block.
3- Connect control cable of sensor by socket see wiring diagram Fig(10), (In case of FARO Light).

OPERATION

- **Operation of Lamp By one of the following methods :-**

1-Put the hand in front of the infrared rays in the light head about (3 -5) cm away.
2- Pressing on the light switch in bracket or assistant table, (In case of FARO Light).
3- Working program(P1 on P2), (In case of FARO Light).

MAINTENANCE

- Use natural water to clean the outer surfaces with a soft cloth. If you wish to use other products to sanitize the outer surfaces of the equipment make sure that they do not contain, alcohol, ammonia, any kind of acid, gasoline, thinners or benzene-based solvents.
- To avoid damaging the surface finish, do not spray deodorizers or insecticides directly onto the equipment.
- Use a very soft cloth steeped in distilled water to clean the reflection, cleaning the reflection without force.
- Dry it with a soft dry cloth.

Replacement of Bulb:

The bulb is periodically replaced ,(to replace it, do as follows):
1- Wait for 30 minutes after disconnecting the light.
2- take off the plastic cover end.
3- Remove the bulb with caution.
4-Take a new bulb with your fingers without touching the globe (use gloves) and mount it in the socket.
5- Remount the protection cap.

Focus Adjustment :

1- Screw the pin at the bottom of the socket base clockwise direction using Alan key 3mm.
2- Remove the cover.
3- Move the socket base forward and backward until you reach the best focus at a distance 80c.m away from the bulb.

DENTIST UNIT

TECHNICAL SPECIFICATIONS

1) Model: *Class A*
2) Design air pressure: 12 bar.
3) Design water pressure: 10 bar.
4) Weight : 9.5kg
5) 3 → 5 modules with water and air coolant, automatic selection.
6) Air and water lines are controlled by adjustable control valves.
7) Anti retraction valve.
8) Air lock arm.
9) Air foot control.

Installation (If Unfixed)

Note: This unit requires regulated air and water supply. Filters are highly recommended.

1- Place the shipping carton in the desired location.
2- Remove the unit from the shipping carton.

A- Mounting:

- Mount the arm (no 1) with the bush (No 4) as shown in Fig.(15).

B- Coolant water, air and power connection:

1- Bring the cables (D1) out of the arm (No. 1) as shown in Fig.(14)
2- Connect the sockets as shown in wiring diagram, fig(10).
3- Connect the air tube (4×6mm) & (2x4mm) as per the labels & marks on it.
4- Connect the water coolant tube (2×4mm) as per the labels & marks on it.

Fine adjustment:

1. Test syringe for proper pressure and function.
2. Check air pressure for each Hand piece according to its instruction, adjust the pressure, by the screw under the table(+ A -).
3. Control the water at hand piece by screwing the knob of the valve (- W +) under the table.

Operation

1- Connect the hand pieces to the tubes as shown at the hand piece instruction manual.
2- The hand piece is activated automatically.
3- Depress the foot control to activate each hand piece. Pressure is shown on the gauge {No. (7) Fig. (14)}.

△ **Caution:** At high speed, pressure should not exceed the limit shown at the hand piece manual.

4- Individual hand piece pressure adjustments from handpiece air regulator knob for coolant air { No. (11) Fig. (14)}.
   (a) Turn adjustment screw clockwise to decrease the hand piece pressure.
   (b) Turn adjustment screw counter to increase the hand piece pressure.

△ **Caution:** Don't screw strongly.

Operation of the water from (ON / OFF) switch {No.(10) In Fig.(14)} ,Control of the water from control knob, {NO (8) in Fig. (14)}

Maintenance

Use natural water to clean the outer surfaces with a soft cloth. If you wish to use other products to sanitize the outer surfaces of the equipment make sure that they do not contain, alcohol, ammonia, acid of any kind, gasoline, thinners or benzene-based solvents.

To avoid damaging the surface finish, do not spray deodorizers or insecticides directly onto the equipment.

Attention:

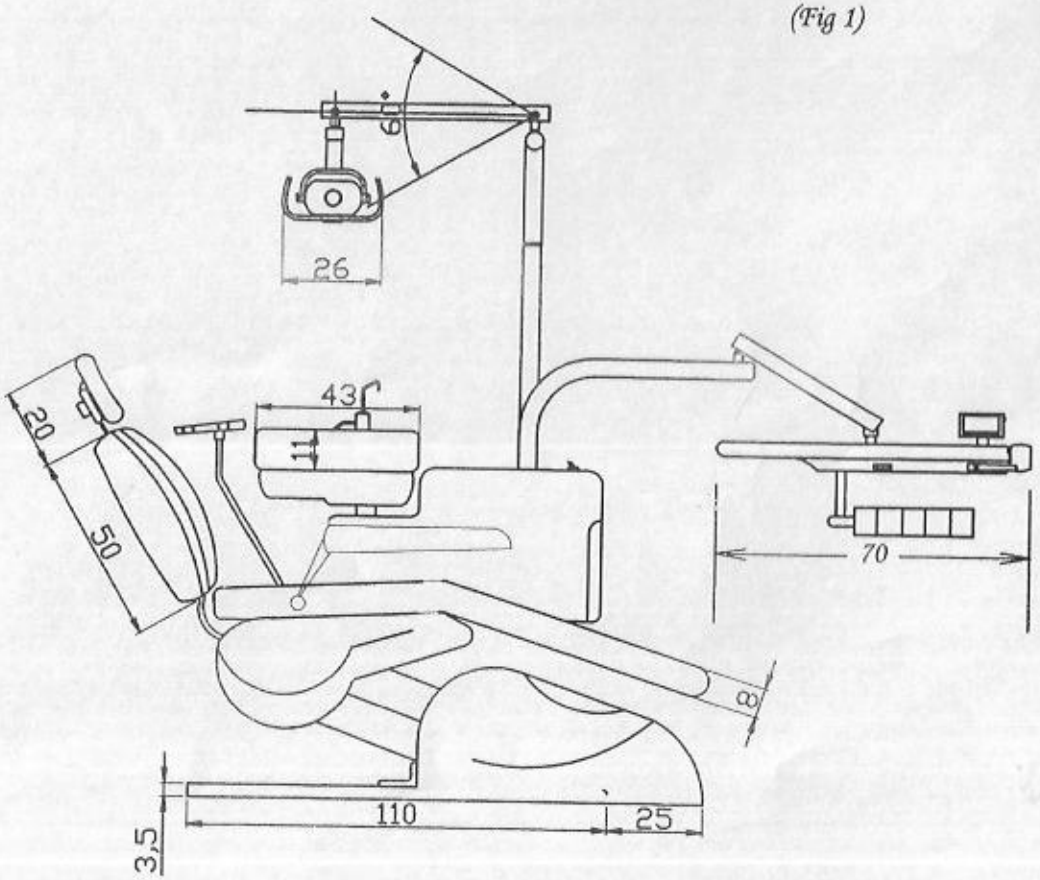
Don't spray directly onto control keypads.

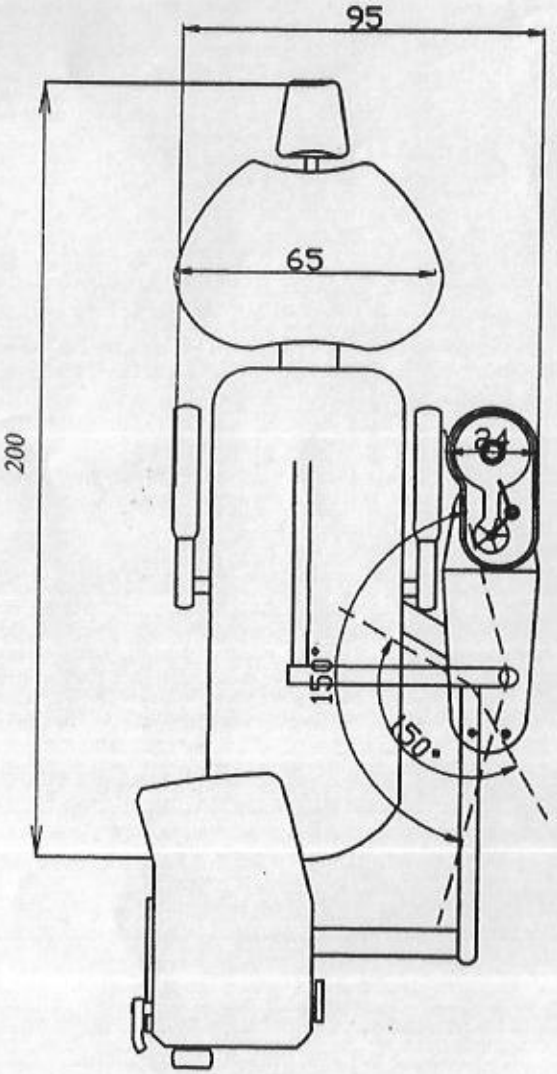
Trouble Shooting

Symptom	Possible Causes and soul.
1- Hand piece lacks power (a) With low pressure.	- Improper supply pressure from compressor.
(b) With normal pressure.	- Hand piece pressure adjustment. - Defective hand piece. - Pinched supply tubing
2- Water coolant does not shut off when although water coolant key is off.	- Air pressure is higher than the water pressure. - Defective water relay valve. - Improper water coolant key.
3- More than one hand place is operating .	- Hand piece is not all the way in the holder. - Defective pilot valve in the holder.
4- Insufficient water coolant Improper in pressure.	- Adjustment coolant flow valve NO. (15) Fig (14) - Water filter may be plugged. - Hand piece may be plugged. - Pinched supply tubing. - Defective water relay .
5- Water cooling is running from hand piece while the hand piece is in holder.	- Hand piece holder out of adjustment. - Water pressure greater than air pressure.

OVERALL DIMENSION

(Fig 1)

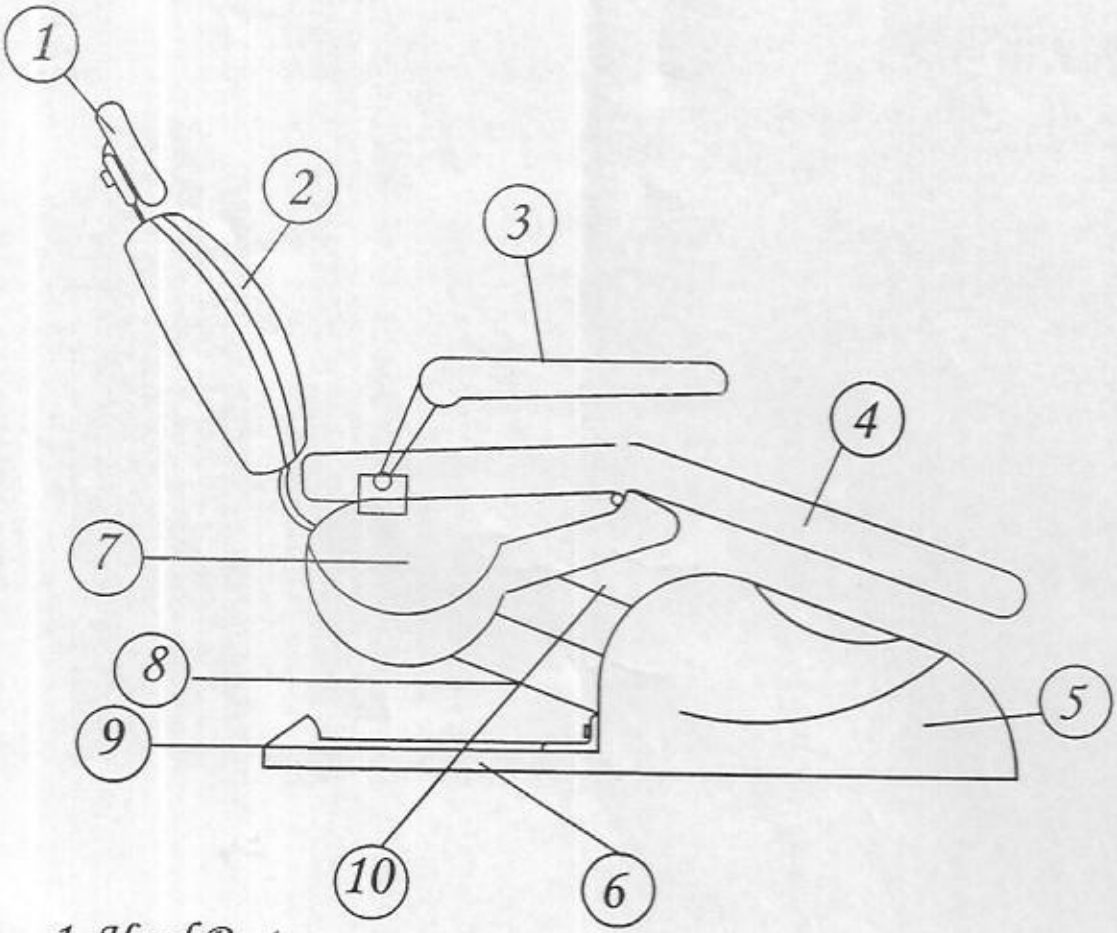




All Dimensions In Cm

Chair unit Configuration

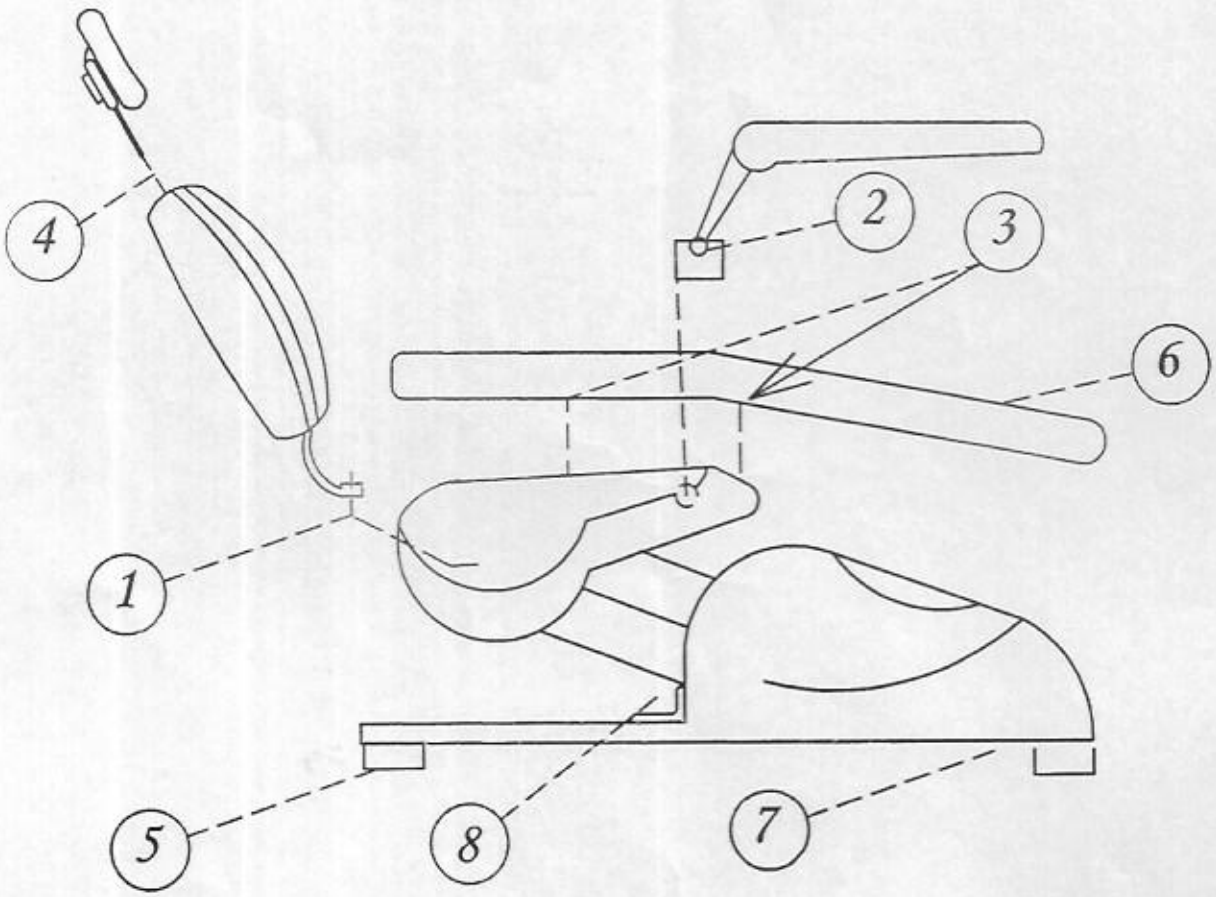
(Fig 2)



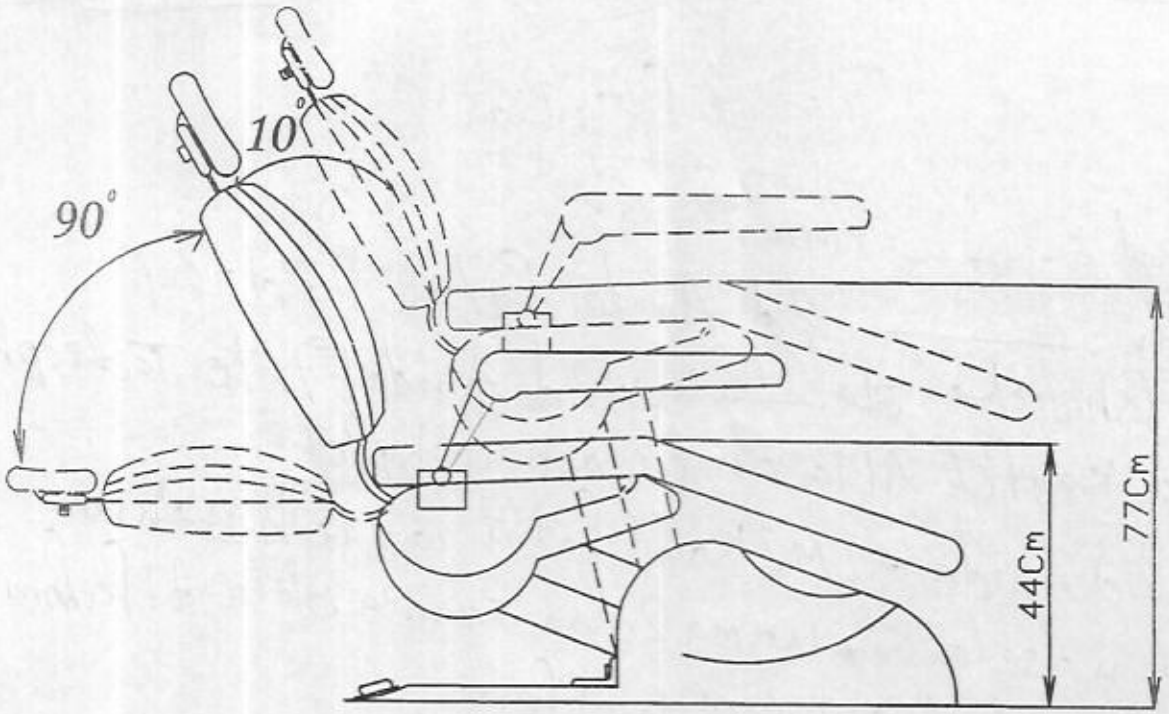
1- Head Rest
2- Back Rest
3- Hand Rest (Left and Right)
4- Seat
5- Motor Cover
6- Chair Base
7-BASE COVER
8-LOWER CHASE COVER
9-FOOT CONTROL Joystick
10-UPPER CHASE COVER

Installation Diagram

(Fig 3)

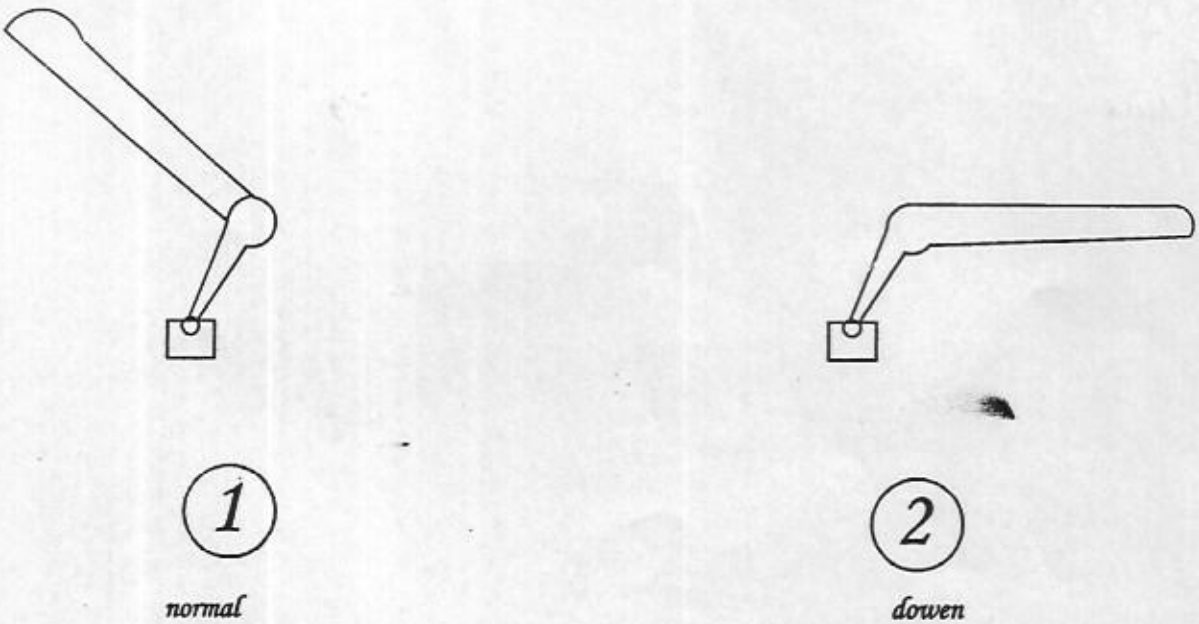


1- Three Bolts with Nuts for Back Rest fixition
2- Hand Rest fixition
3- FOUR Bolts for Seat fixition
4- Head Rest Guide
5- Rubber block
6- Seat pad
7- Power cable
8- Power switch



max & mini hight
and back angels

Fig (4)



hand rest mouvment

Fig (5)

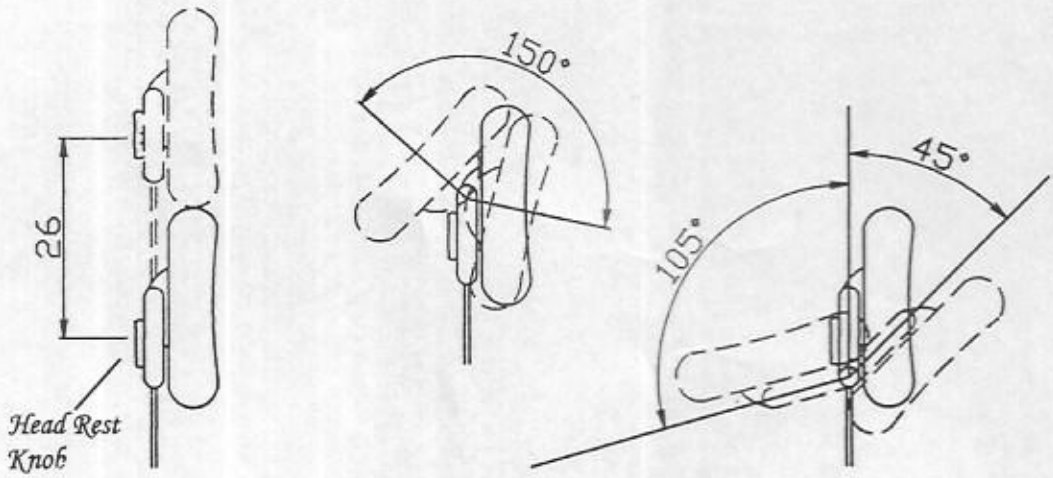
certification

- Tashaed ------ Ana:
  Mr: _____ 2d Amda Fatrt Tadreep
  Belshareka 3la ___ wa2d Amdaftrte Tadreph
  3la kayfet ALTa3aml ma3h wakyfet ------
  wa2d Amda ALM2kourfatrt Tadreph Behsn
  seer waselouK, wama2dra sare3a 3lala ALfahm
  Wasur3t Alestea3am walfam

  wahabhi Shada mena beralk

Administrator

signture _____

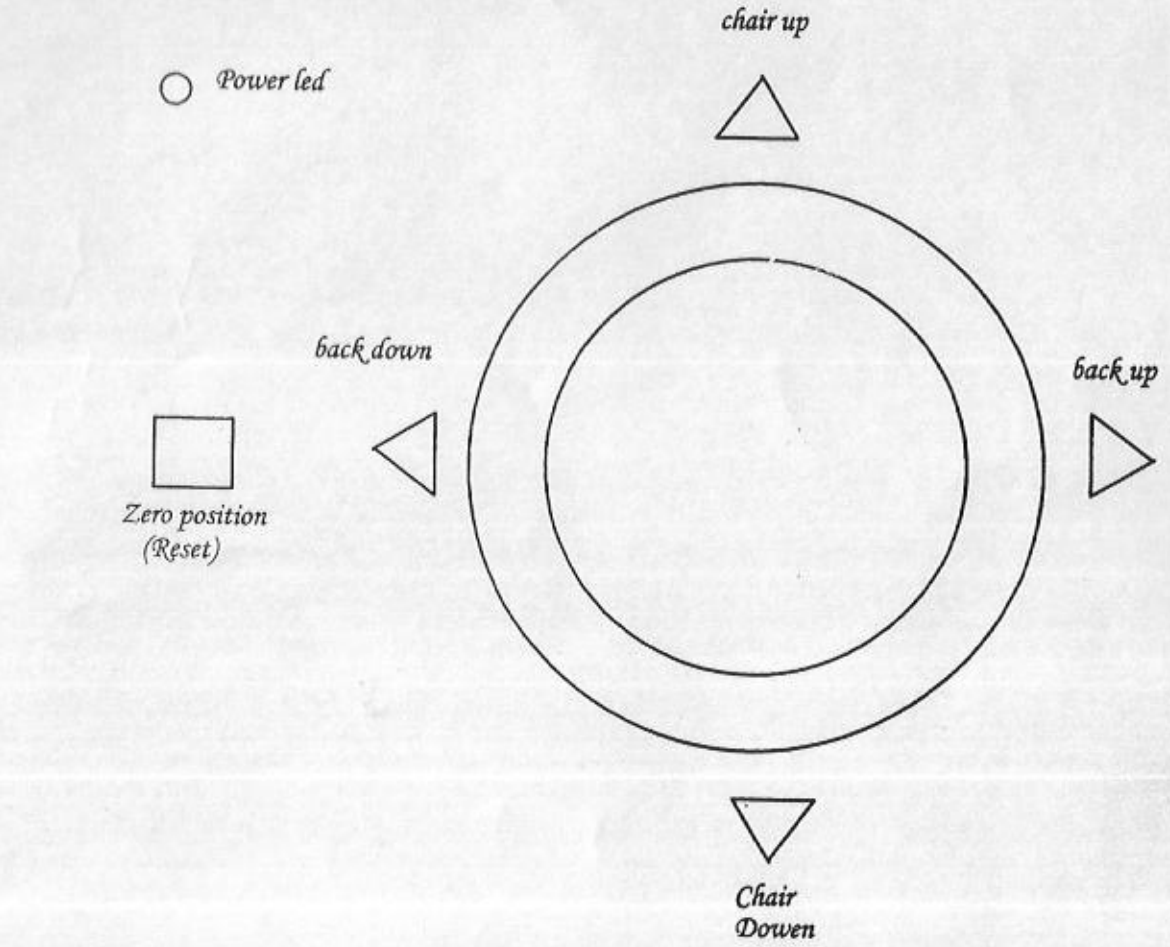


Head Rest Movment

(Fig 6)

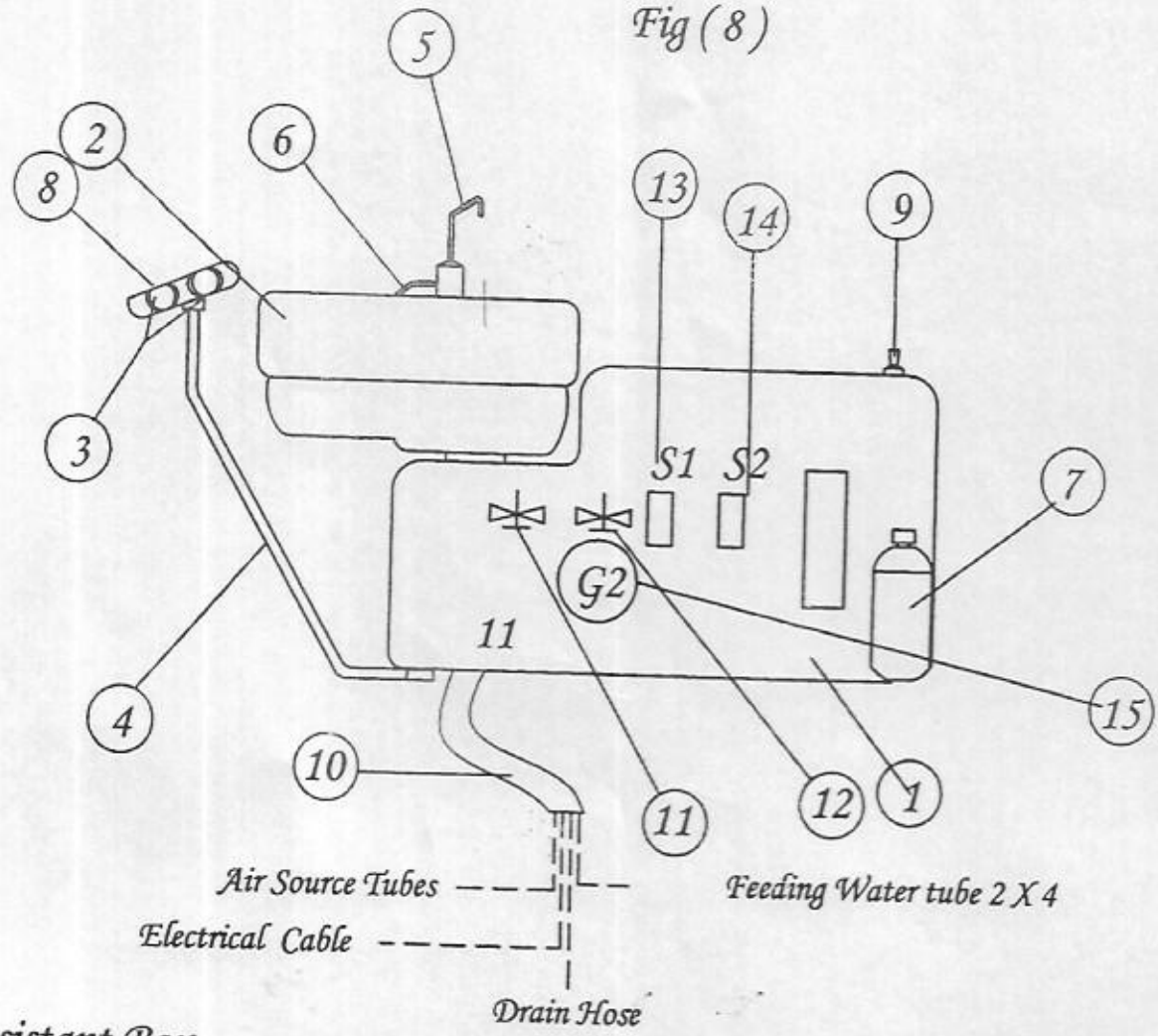
joy stick foot controle

(Fig 7)



Assistant's unit Configuration

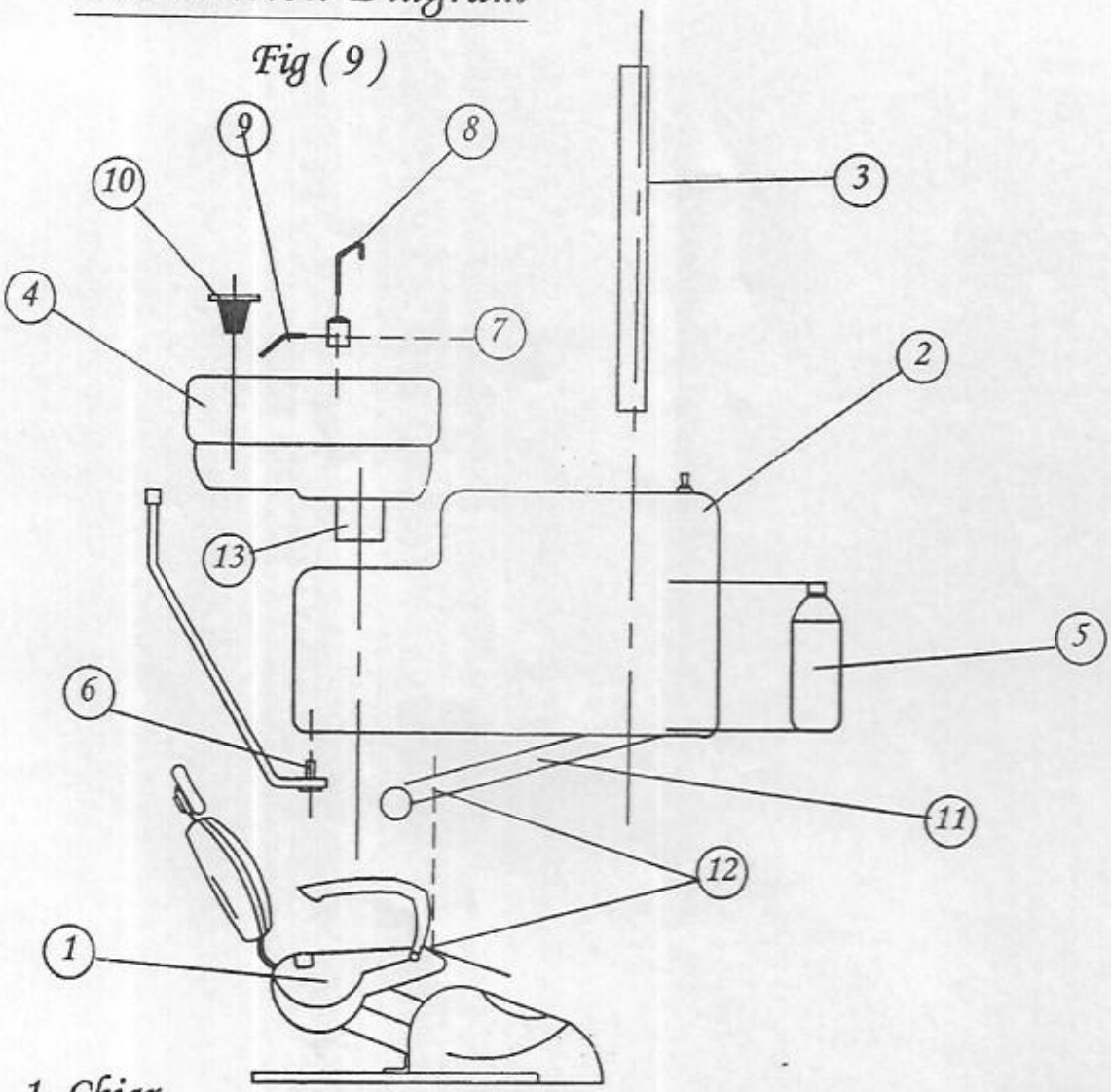
Fig (8)



1- Assistant Box
2- Bowl
3- Saliva and High Suction Holder
4- Assistant's Arm
5- Cup Fill Spout
6- Bowl Rinse SpoutER
7- Bottle
8- Assistant control board
9- Water Source Selection Switches for Dentist Unit
10- Cover Hose
11-Bowel flow control valve
12-Cup flow control valve
13- Cup soleniod
14- Bowel
15- Bottle pressure gage (adjust to 2 bar)

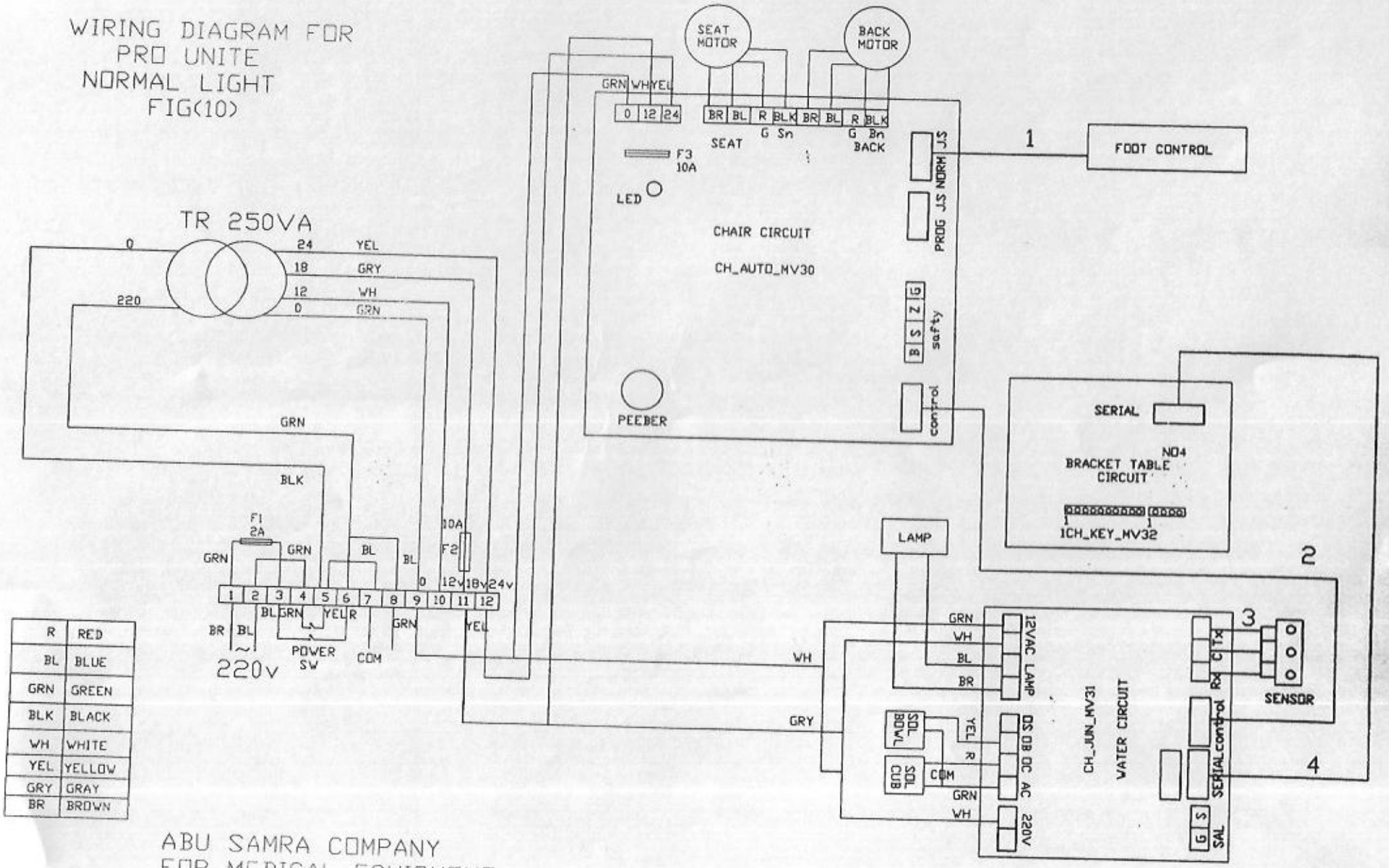
Installation Diagram

Fig (9)



1- Chiar
2- Assistant Box
3- Straight Arm (Light unit)
4- Bowl
5- Bottle
6-Assistant Arm Rotating Shaft
7- Water distributor
8- cup fill spout
9- Bowl Risne spout
10- Strainer
11-Assistant unit Support
12- four Bolts for fixing Assistant unit Support with the Chair
13- Bowl Rotating shaft

WIRING DIAGRAM FOR PRO UNITE NORMAL LIGHT FIG(10)



R	RED
BL	BLUE
GRN	GREEN
BLK	BLACK
WH	WHITE
YEL	YELLOW
GRY	GRAY
BR	BROWN

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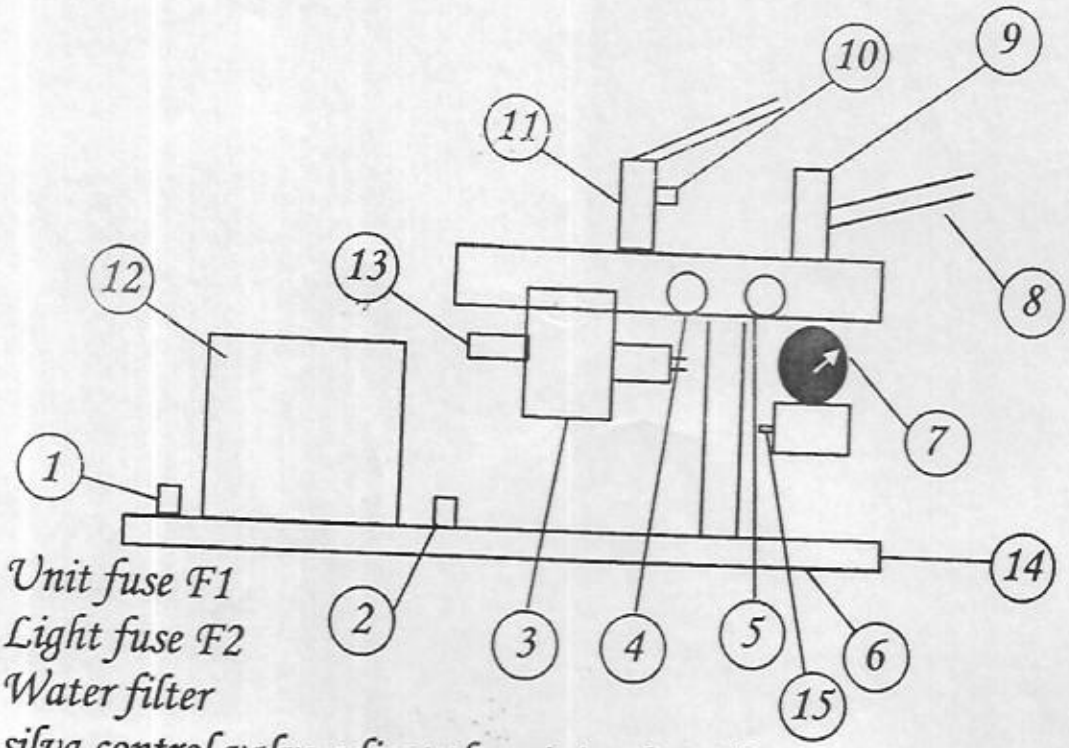
connection of Water-Air Inlet

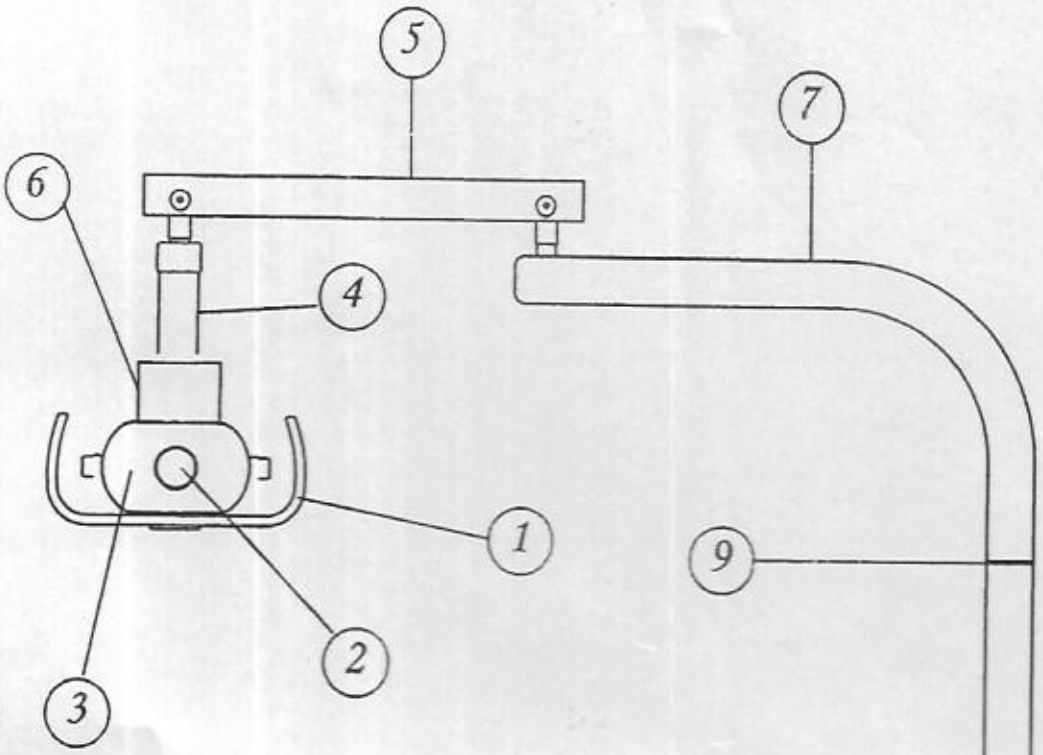
Fig (11)



1- Unit fuse F1
2- Light fuse F2
3- Water filter
4- silva control valve adjust the minimal air flow to det resbonsable vacum
5- High suction control valve
6- Front of chair base
7- Inlet pressure gage
8- High suction hose
9- High suction generator
10- Sliva hose
11- Saliva generator
12- Power trans
13- Water inlet
14- Chair Front Base
15- Air Inlet (pressure must be 4-6 bar)

Light unit Configuration

Fig (12)



1- The Light Hand
2- Halogen Bulb and Reflector
3- Protection Cover
4- Light Holder
5- Height Arm Varying
6- Sensor
7- Horizontal Arm (Circular Arm)
8- Stright Arm Mounted at the Assistant box
9- Arm Ring

two wires 12V Bulb

red
yellow
green
black

Light Sensor cable (C3)

Installation Diagram

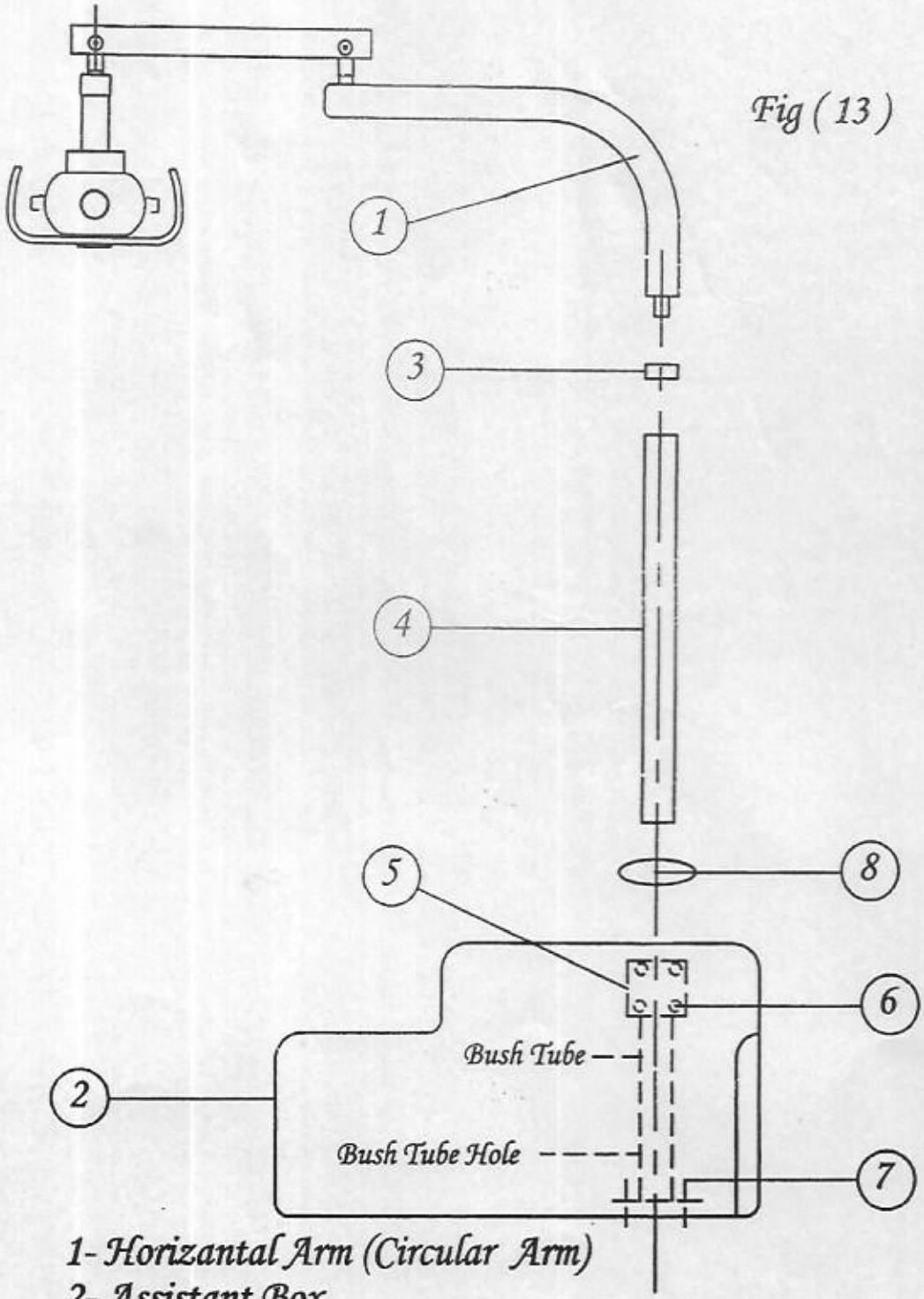
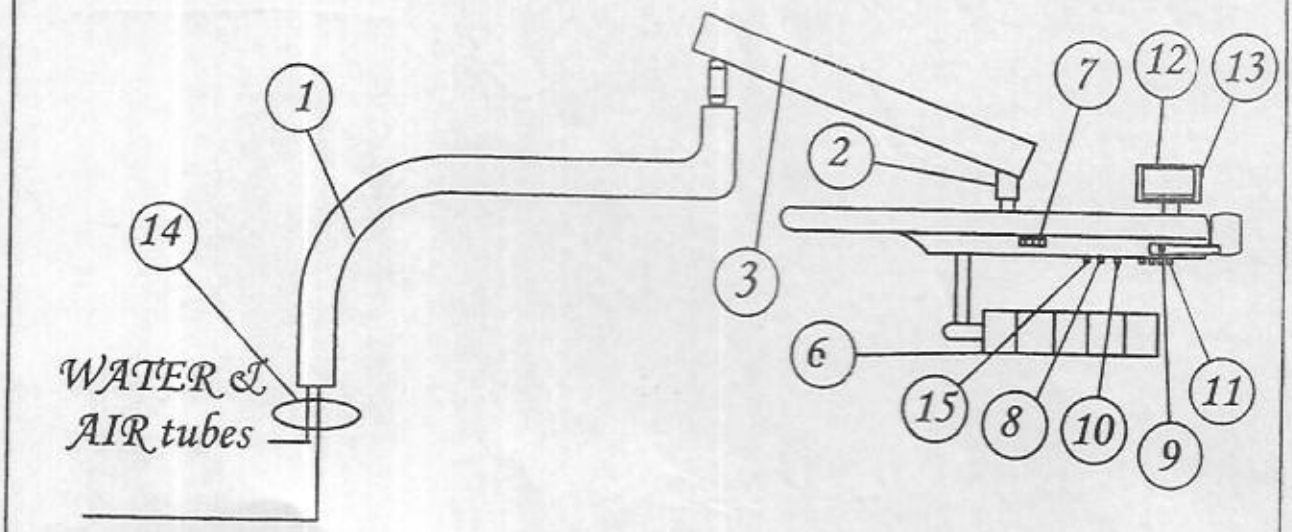


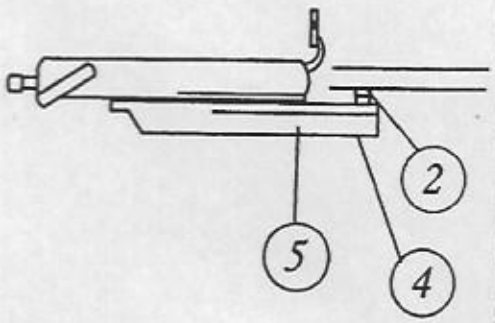
Fig (13)

1- Horizantal Arm (Circular Arm)
2- Assistant Box
3- Arm Ring
4- Straight Arm (Light unit holder)
5- Arm Bush
6-Allan Bolts for adjusting Arm inclination
7- Four Bolts for fixing bushs in Assistant Box
8- Two cables See Wiring Diagram

Dentist Unit Configuration

Fig (14)

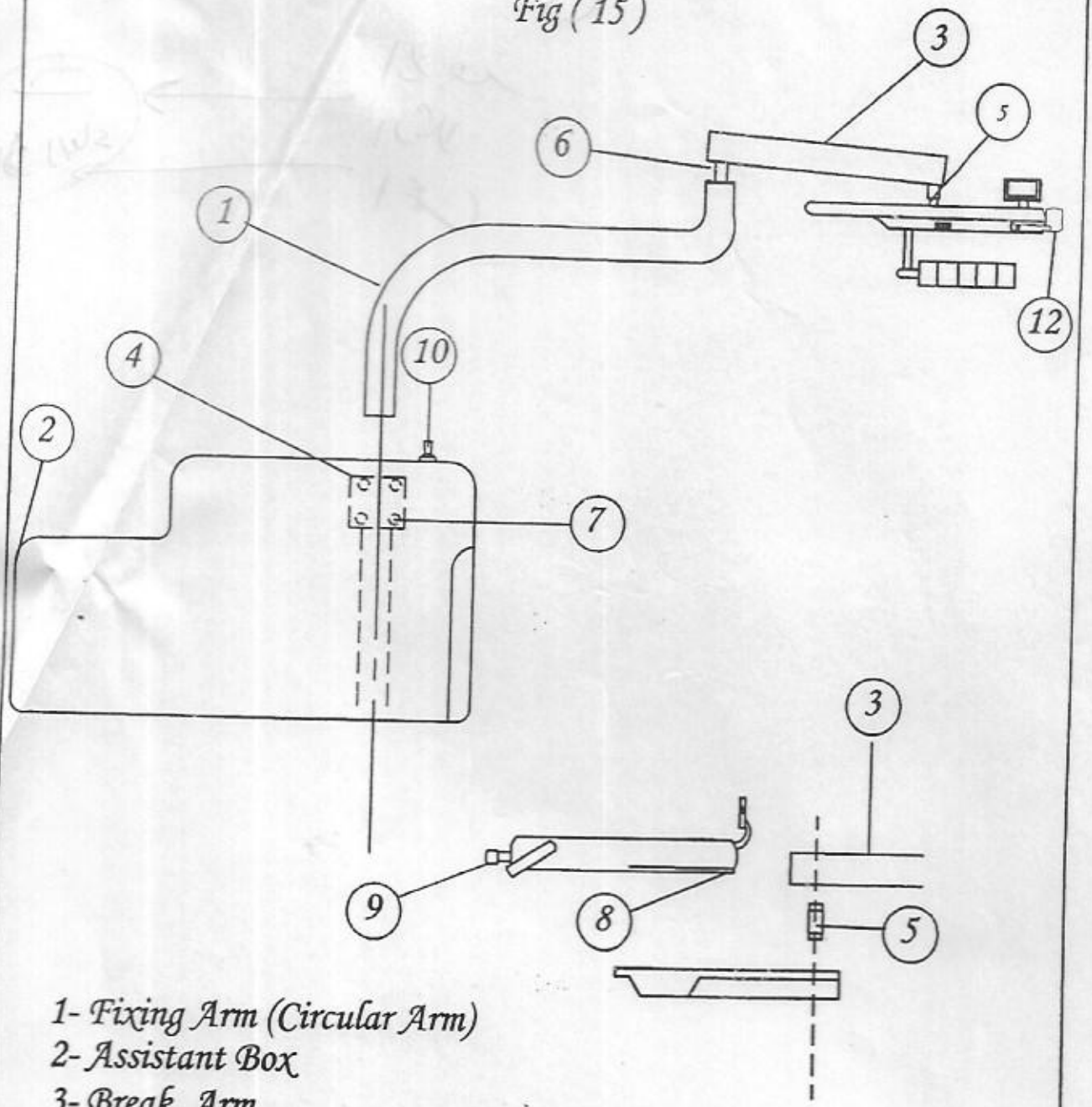




1- Fixing Arm (Circular Arm)
2- lower shaft
3- Break Arm
4- BRACKET TABLE SUPPORT
5- Dentsist table Fixing bolt
6-Universal Handpieces Holder
7- Hand piece Pressuer Guage
8- General water regulator
9- Break Switch for Arm (3)
10- Water on-off Switch
11- Hand piece Air Regulator Knob for Colant Air
12- Film Viewer
13- Film Viewer Switch
14- Wires and Air TUBES WITH ELECTIC CABLE
15- coolaNT Flow Valv

Installation Diagram

Fig (15)



1- Fixing Arm (Circular Arm)
2- Assistant Box
3- Break Arm
4- Circular Arm Bush
5- Lower Shaft
6-Upper Shaft
7- Allan Adjusting Bolt for Dentist table horizental adjustment
8- Two Bolts for Fixing The Frame
9- Braek switch for Arm (3)
10- Water Source Selection Switch for Dentist Unit
11- Bracket
12- Doctor Keyboard